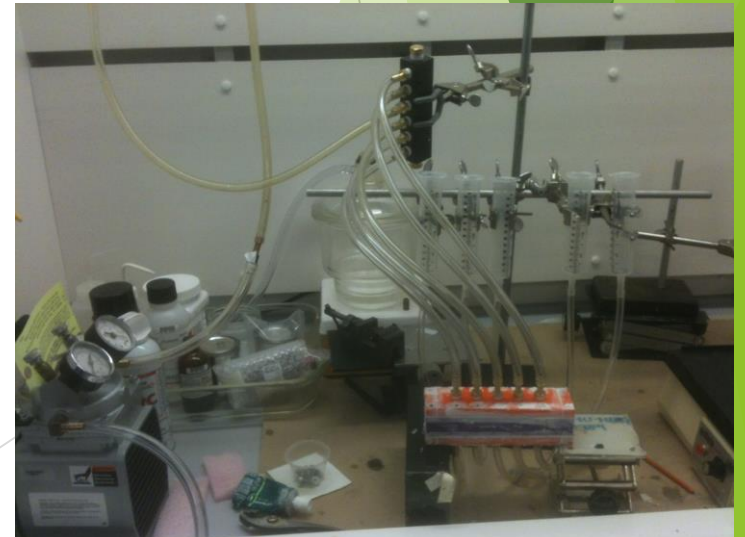
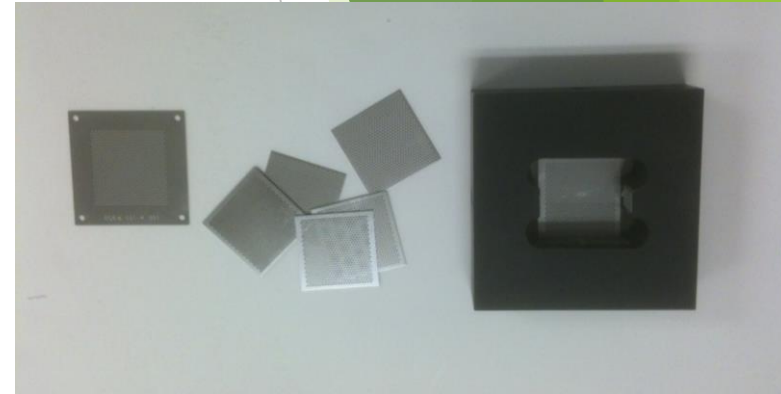
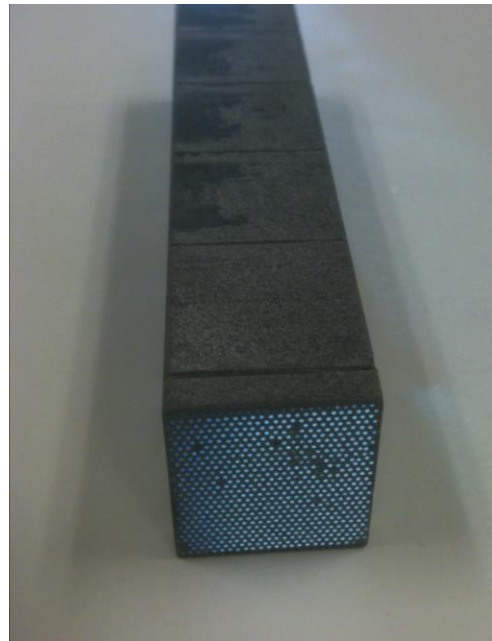
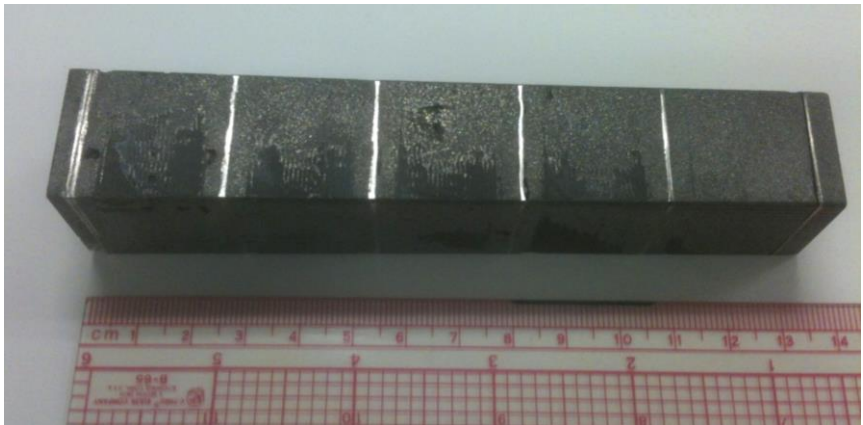
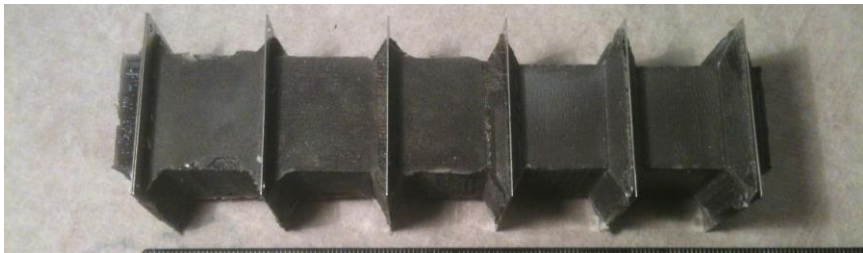


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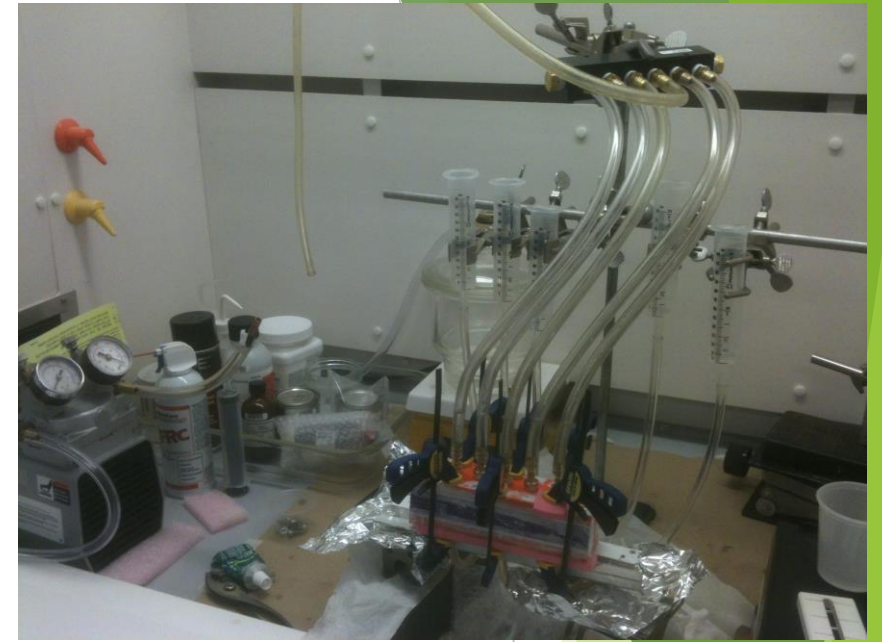
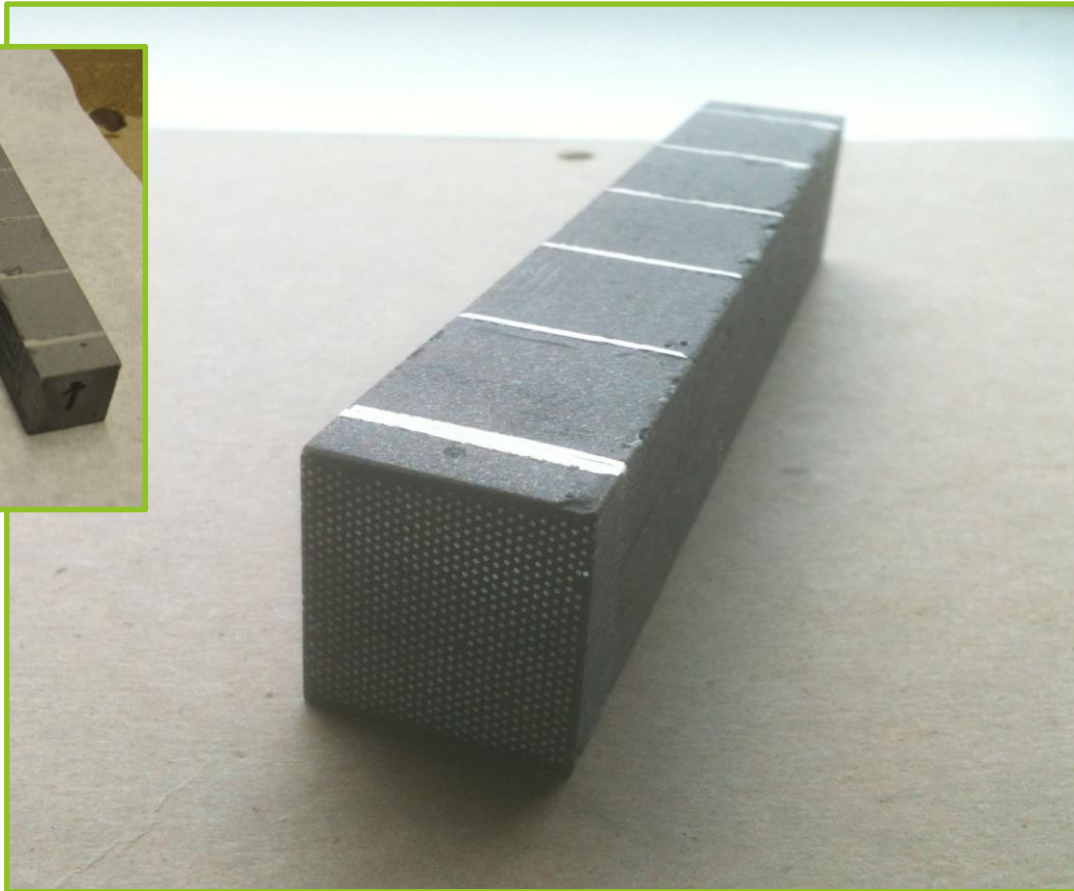
W/fiber module production:

- Continuing to develop 2 parallel methods: stepped screens and tilted wire frames
- Produced 2-D projective modules with stepped screen method
- Made second module with modified mold/procedure - shorter epoxy flow distances, multiple inputs/outputs
- Next step - make module with trimmed/borderless screens
- Looking at limitations of 1 tower vs 2x2 tower fabrication

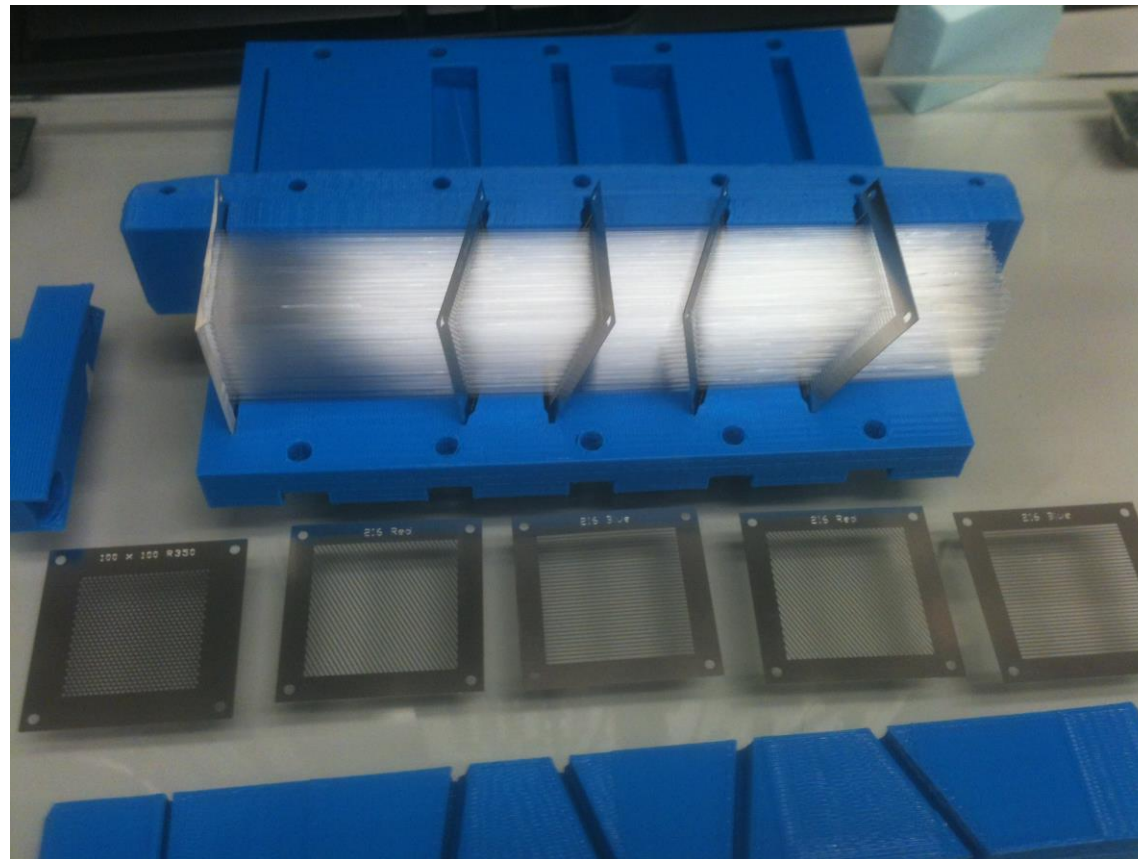


Made second 2D projective module

- Problems with leaky mold - Makerbot printed mold is porous
- Flowed epoxy through short distance across mold - better result than previous attempt
- No obvious “dry powder” regions - epoxy appears to have penetrated thoroughly
- Used mold (destructively) to hold module for machining

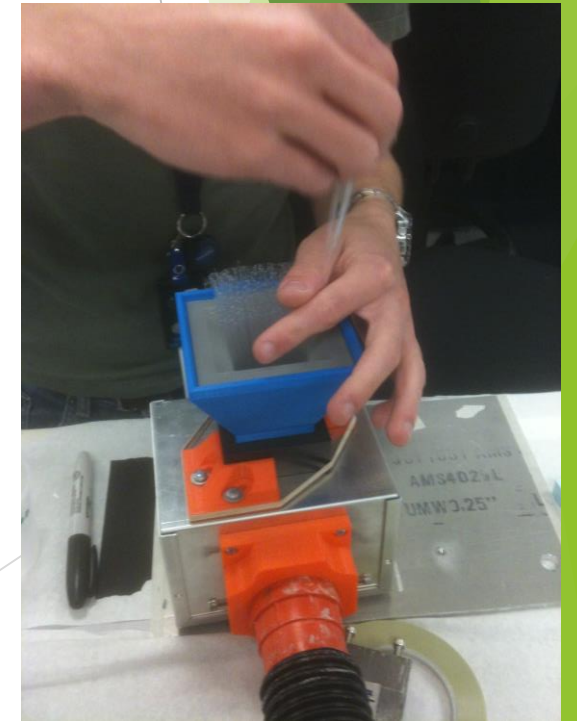
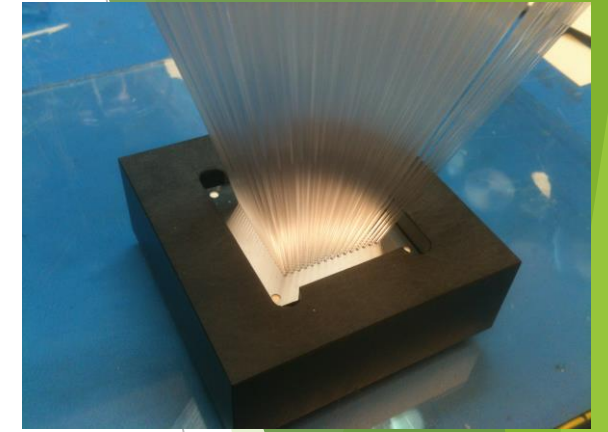


- Optimizing mold for tilted frames method - tuning frame positions and number of frames
- Loading of fiber/wireframe assemblies into mold
- Producing new drawings for “bowtie” molds



Refining process for loading fibers into screens

- Tuning shim spacing between screens
 - Added a funnel/hopper to facilitate loading
 - Tuned funnel pitch with shim spacing
 - Added vacuum attachment
-
- Loading times consistently < 10 min for stepped screens,
 - faster for “straight through” screens and wire frames
-
- Scalable to 2x2 tower modules? - tune shim spacing, hole size/shape



Tungsten/fiber modules from Tungsten Heavy Powder.

- Doing Q/A measurements
- Setting up for light output/uniformity measurements before doing destructive testing
- Consulted Olympus rep about instruments for ultrasound flaw detection. They offered to image modules to demonstrate capabilities.

